



DOCUMENTS CONSIDERED TO BE RELEVANT			CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	
X,D	US 6 531 701 B2 (CHOU MAU-SONG ET AL) 11 March 2003 (2003-03-11) * column 3, line 16 - column 4, line 31; figure 1 *	1-3,5,7	G01N21/31
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X	SOVIET PATENTS ABSTRACTS Week 9339 Derwent Publications Ltd., London, GB; Page 4, AN 1993-309974 XP002281299 -& SU 1 434 950 A (NIKIFOROV A S ET AL), 7 October 1992 (1992-10-07) * abstract; figure *	1,2,5,7	
X	US 5 751 416 A (COOK ROBERT L ET AL) 12 May 1998 (1998-05-12)	8,11,12,	TECHNICAL FIELDS SEARCHED (Int.Cl.7)
A	* column 5, lines 11-29; column 6, line 58 - column 7, line 16; column 10, lines 6-8; figure 2 *	14 9,10,13	G01N
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	FLOWER W L ET AL: "A laser-based technique to continuously monitor metal aerosol emissions" FUEL PROCESSING TECHNOLOGY, vol. 39, 1994, pages 277-284, XP002281298 * abstract; figure 1 *		

The present search report has been drawn up for all claims			
2	Place of search	Date of completion of the search	Examiner
	MUNICH	24 May 2004	Hoogen, R
CATEGORY OF CITED DOCUMENTS			
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document			
T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 03 02 6826

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

24-05-2004

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ABSTRACT / ZUSAMMENFASSUNG / ABREGE

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A system for detecting and analyzing chemical and biological aerosols is described. A beam of radiation (20) is used to radiate a target cloud (12) including the aerosol. The radiation energy that is absorbed by the cloud is thermalized by collisional energy transfer between the molecules that absorb the radiation to generate heat. The wavelength of the electromagnetic radiation is selected to be in resonance with the absorption lines of water or oxygen molecules in the cloud, or to be in resonance with absorption lines of known target molecules in the cloud to generate the heat. An increase in the cloud temperature increases the emission intensity of the molecules against the background, resulting in improved detection of the target molecules in the aerosol. A tracking telescope (16) collects the thermal emissions generated by the radiation beam. A spectrometer (18) receives the emissions from the cloud and generates an emission spectrum. In addition to this remote sensing setup a further embodiment is described wherein the aerosol is contained in a sample chamber.